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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,250	01/08/2001	Masanori Nanbu	P20453	5867

7055 7590 10/25/2004

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EXAMINER
CABRERA, ZOILA E

ART UNIT	PAPER NUMBER
2125	

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/720,250	NANBU ET AL.	
	Examiner	Art Unit	
	Zoila E. Cabrera	2125	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30 and 37-48* is/are pending in the application.

4a) Of the above claim(s) *1-30 and 37-42* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *43-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-30 and 37-42* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Final Rejection

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-30 and 37-42 have been withdrawn from consideration.

Pending claims 31-36 have been cancelled.

New claims 43-48 are remained for consideration.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 43 is rejected under 35 U.S.C. 102(b) as being anticipated by **Wayne et al. (US 5,377,116)**.

Regarding claim 43, **Wayne** discloses a machining possibility calculator, comprising:

- a machine data input device that inputs machine data for a machine element to be designed (Fig. 1, i.e., Tool Initial Design, Mesh, Model, Material Database), the machine data for the machine element including structure data (Fig. 1, Mesh; Figs. 3A-3B; Col. 6, lines 2-14), material quality data (Fig. 1, material database; Col. 23, lines 66-67), and shape data specified by a shape pattern selected from

a plurality of shape patterns and by a set of size parameters selected from a plurality of sets of size parameters corresponding to the selected shape pattern (Fig. 2A, i.e., step i, select tool form geometry ; Fig. 19); a material data input apparatus that inputs material feature data including features of a material to be machined by the machine element (Col. 23, lines 66-67, i.e., materials database includes physical and mechanical properties of the tool *and the workpiece*); and a machining verifier which verifies whether the machine element to be designed is capable of being machined on the basis of the input machine data and material feature data (Fig. 1, step 19, Tool Design Acceptable/Unnacceptable?; Fig. 2C, step ff, Results Acceptable?, please note that step ff is the result of flowcharts A, B and C, wherein the machine data and material data of the workpiece is taken into account; Col. 24, lines 25-28 and lines 36-38).

Claim Rejections - 35 USC § 103

3. Claims 44-45 and 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wayne,** as applied to claim 43 above, in view of **Imazu Yoshiteru (JP 08-155560).**

Regarding claims 44-45 and 47, **Wayne** discloses the limitations of claim 43 above but fails to disclose the limitations of claims 44-45 and 47. However, **Imazu** discloses such limitations as follows:

- the features of the material to be machined include a plate thickness and the material quality of a plate material (Constitution, lines 2-3, i.e., work data of plate thickness, material detail, ..);

- the machining verifier performs the verification by comparing a resisting pressure of the machine element, obtained according to a strength calculation using the machine data, to a machining pressure, obtained from the material feature data, necessary for machining (Constitution, lines 3-10, i.e., die data and work data of material detail is used for operating the pressure value required for pressing; Purpose, lines 1-5, i.e., operating required pressure beforehand based on data of a die and work and controlling by a pressure regulator so that the operated pressure is obtained at the moment of pressing).
- the machine element to be designed is a die for a predetermined type of machining, the machine data includes structures and material qualities of a punch and a die, and a clearance between the punch and the die (Purpose, line 1, i.e., to make appropriate punching pressing; Constitution, lines 1-3, i.e., die data of shape, dimension, etc., and work data of plate thickness, material detail).

Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the teachings of **Wayne** with the teachings of **Imazu** because it would provide an improved punching pressing device by controlling the pressure at the moment of pressing (**Imazu,** Purpose).

4. Claim 46 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wayne,** as applied to claim 43 above, in view of **Nakajima et al. (US 6,338,000)**.

Regarding claim 46, **Wayne** discloses the limitations of claim 43 above but fails to disclose that the verifier performs verification by checking consistency between the

size parameters. However, **Nakajima** discloses a verification process wherein consistency between the size parameters is performed (Col. 5, lines 60-65, i.e., an offset and a distance between adjacent complete shape surfaces of a three dimensional shape is viewed in order to determine whether the complete shape surfaces are acceptable or not; Col. 8, lines 33-38). Therefore, it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to combine the design system of **Wayne** with the method of verifying shape data of **Nakajima** because it would provide an improved design system by verifying, highly easily and reliably, the shape data of a product (**Nakajima,** Col. 3, lines 38-41).

5. Claim 48 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wayne.**

Regarding claim 48, **Wayne** discloses the limitations of claim 43 above and **Wayne** further discloses that the machine element to be designed is a die apparatus for a predetermined type of machining (Col. 2, lines 1-2; Col. 25, lines 28-29; Col. 70, lines 36-39). **Wayne** discloses that the machine data includes nose radius, width angle, rake angles (Fig. 19). However, **Wayne** does not specifically disclose a tip end radius, tip end angle and V width of the die apparatus. But it would have been obvious to a person of the ordinary skill in the art at the time the invention was made to select parameters of the tool such as radius, angle and width as taught by **Wayne** and, depending on the specific tool, select a tip end radius, angle or width, because it would provide an improved system for comprehensive and accurate modeling and for adaptively evaluating tool response (**Wayne**, Col.3, lines 30-34).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning communication or earlier communication from the examiner should be directed to Zoila Cabrera, whose telephone number is (703) 306-4768. The examiner can normally be reached on M-F from 8:00 a.m. to 5:30 p.m. EST (every other Friday).

If attempts to reach the examiner by phone fail, the examiner's supervisor, Leo Picard, can be reached on (703) 308-0538. Additionally, the fax phones for Art Unit

2125 are (703) 872-9306. Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist at (703) 305-9600.

Zoila Cabrera
Patent Examiner
10/20/04

LEO PICARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100